

REMARKS

This application has been reviewed in light of the Office Action dated January 5, 2004. Claims 1-38 are presented for examination, of which Claims 1, 24, 29, 30, 32, 34, 36, and 38 are in independent form. Claims 1, 24, 29, 30, 32, and 34 have been amended to define still more clearly what Applicant regards as his invention and Claims 25-28, 36, and 38 have been amended as to matters of form. Favorable reconsideration is requested.

As to an initial matter, Applicant submits the following comments.

The Office Action indicates that Applicant's previous arguments with respect to Claims 1-38 have been considered but are moot in view of the new grounds of rejection. However, Applicant believes that several points raised in one or more previous responses are still pertinent to the current rejections, and notes that the current Office Action has provided no response to the following points.

The primary citation in the last three Office Actions has been *Becker*. The Office Actions have conceded that *Becker* does not disclose or suggest the step of arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region has a substantially uniform opacity. Applicant has argued, in responses filed on December 30, 2002, July 24, 2003, and December 5, 2003, that *Becker* teaches away from a system having a substantially uniform opacity. *Becker* relies on variations in opacity to indicate the distribution of data in a scattered plot. Thus, imposing a uniform opacity would render *Becker* unfit for its intended purpose. The recent Office Actions do not, in Applicant's understanding, consider, and certainly do not rebut this argument.

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there can be no suggestion or motivation to make the proposed modification (MPEP § 2143.01).

In addition, the proposed modification cannot change the principle of operation of a reference (MPEP § 2143.01). The method of *Becker* relies on displaying variations in opacity in order to visually approximate the distribution of scattered data. As stated in column 1, lines 65 and 66, the opacity of each splat is a function of the number (count) of data points in a corresponding bin. Similarly, column 6, lines 38-40, confirm that the splat opacity is a function of the count of aggregated data points in a corresponding bin.

Because *Becker* relies on variations in opacities to visually approximate scattered data, Applicant respectfully submits that to modify *Becker* so as to provide regions of substantially uniform opacity would change the principle of operation of *Becker*.

Applicant submits that this point is still pertinent to the rejections in the current Office Action.

Independent Claim 32 includes the step of varying the opacity of one or more of the shape elements over time, and periodically rendering the shape elements. In earlier responses filed on July 24, 2003, and December 5, 2003, Applicant has noted the corresponding Office Actions were silent as to how this feature is anticipated or suggested by the cited prior art. Once again, the current Office Action does not indicate how the cited art is seen to teach or suggest the feature of varying the opacity with time.

Furthermore, the primary citation, *Becker*, teaches away from such varying opacities, because the *Becker* method makes use of differences in opacities to represent scattered plots of data. Since the opacity of the splats in *Becker* is used to represent the

number of data points within a bin, varying the opacity of a splat over time would render *Becker* incapable of achieving its stated purpose of representing the number of data points in the bin.

Although Applicant has previously presented the above argument in relation to Claim 32, the current Office Action again cites *Becker* against Claim 32, without indicating how *Becker* may properly be modified to read on to the invention of Claim 32.¹

Claims 1-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,861,891 (*Becker*) in view of U.S. Patent No. 6,147,690 (*Cosman*) and U.S. Patent No. 5,396,594 (*Griffith et al.*).

As shown above, Applicant has amended independent Claims 1, 24, 29, 30, 32, and 34 in terms that more clearly define what he regards as his invention. Applicant submit that these amended independent claims and independent Claims 36 and 38, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 1 is to a method of generating a colored or shaded texture for images to be printed or displayed on a display device. A plurality of shape elements are provided. Each shape element defines a surface and is provided with an opacity which varies over its surface. The shape elements are arranged in an overlapping fashion to fill a predetermined region of the images such that the region when so filled has a substantially uniform opacity. Further, the shape elements

¹/The foregoing omissions make the outstanding Office Action incomplete. If the Office's next Action maintains the foregoing incomplete rejection (Claim 32), or enters a new rejection of any claim not necessitated by the present Amendment or by any art cited by Applicant, then such Action must be non-final.

are rendered for output to a printer or display device, such that the overlapping opacities generate a colored or shaded texture.

The Office Action concedes that *Becker* and *Cosman* fail to teach the step of arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region has a substantially uniform opacity. The Office Action states that *Griffith et al.* overcomes the deficiencies of *Becker* and *Cosman* as prior art against Claim 1.

However, as discussed above, Applicant submits that to modify *Becker* as proposed by the Office Action would be to change the principle of operation of *Becker* and would, furthermore, render *Becker* unsatisfactory for its intended purpose of visually approximating scattered data.

Griffith et al. relates to the use of a computer to combine images by video treatment. The computer is used for storing component images and a single frame store is used for storing the resultant image ready for display.

Starting at column 4, line 38, *Griffith et al.* describes how image layers 8 and 9 can be combined in a number of ways. The *Griffith et al.* system provides for three different types of overlay. The second type of overlay discussed, from column 4, line 62, through column 5, line 5, relates to combining an overlay of uniform opacity with a background image. *Griffith et al.* states that this option is used in a cartoon image system. Column 3, lines 24-33, states that when cartoon images are being generated in which a part of an image is successively displaced between images, the previous few images can be combined to show the previous few positions of a component allowing the next image to be edited in order to show a corresponding displacement of the image component in the present image in order that on successive display of the component images, a steady

movement of the image component will be shown. *Griffith et al.* thus describes combining a component of a cartoon image, the component having uniform opacity, with a background image.

Applicant submits that, even if it were permissible to combine *Griffith et al.* with *Becker* and *Cosman*, the resulting combination would not teach the features of Claim 1. Specifically, combining an overlay of uniform opacity with a background image, as in cartoon images, is not seen to suggest the step of arranging shape elements in an overlapping fashion to fill a predetermined region of the images such that the region when so filled has a substantially uniform opacity.

The Office Action states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the region, having substantially uniform opacity of *Griffith et al.*, to the system of *Becker* and *Cosman* so as to merge an image and a mask to form an image for display. Applicant submits that the ability to merge an image and a mask provides no suggestion or motivation of combining *Becker*, *Cosman* and *Griffith et al.*. Further, as discussed above, even if *Becker*, *Cosman* and *Griffith et al.* were to be combined, the result would not suggest the desirability of invention of Claim 1.

Accordingly, Applicant submits that Claim 1 is clearly patentable over the cited prior art.

Independent Claims 24, 29, 30, and 34 include features similar to those discussed above with respect to Claim 1, and therefore also are believed patentable for reasons substantially similar to those discussed above with respect to Claim 1.

The aspect of the present invention set forth in Claim 32 is a method of generating a colored or shaded texture for images, where the images are to be displayed on a display device or printed. The method includes providing a plurality of shape elements,

each shape element defining a surface, providing each of the shape elements with an opacity which varies over its surface, and arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region when so filled has a substantially uniform opacity. The method also includes rendering the shape elements for output to a printer or display device, such that the overlapping opacities generate a colored or shaded texture, and varying the opacity of one or more of the shape elements over time, and periodically rendering the shape elements.

An important feature of Claim 32 is varying the opacity of one or more of the shape elements over time and periodically rendering the shape elements.

The Office Action does not indicate where this feature is taught or suggested in the cited prior art. Applicant has found nothing in *Becker, Cosman* and *Griffith et al.* that would teach or suggest varying the opacity of shape elements over time and periodically rendering the shape elements. Accordingly, Claim 32 is therefore believed patentable over *Becker, Cosman* and *Griffith et al.*

In addition, Applicant submits that Claim 32 is patentable in light of the cited prior art for the reasons substantially similar to those discussed above with respect to Claim 1.

The aspect of the present invention set forth in new independent Claim 36 is a method of generating an interference texture for an image. The method includes defining at least one texture region within the image, providing a plurality of shape elements, each shape element defining a surface and having an opacity that varies over the surface, and identifying a plurality of substantially equidistant points within each texture region. The method also includes placing a shape element at each identified point such that adjacent shape elements overlap to provide a substantially uniform opacity within each texture

region, and rendering the shape elements for output to a printer or display device such that the overlapping opacities generate an interference texture within each texture region.

Among other important features of Claim 36 are identifying a plurality of substantially equidistant points within each texture region, and placing a shape element at each identified point such that adjacent shape elements overlap to provide a substantially uniform opacity within each texture region.

The Office Action discusses the rejection of Claim 36 at pages 2-4.

However, the Office Action does not indicate where the prior art teaches or suggests the above-mentioned identifying and placing steps. Applicant submits that nothing has been found, or pointed out, in *Becker*, *Cosman*, and *Griffith et al.* that would teach or suggest the features of identifying a plurality of substantially equidistant points within each texture region and placing a shape element at each identified point such that adjacent shape elements overlap to provide a substantially uniform opacity within each texture region, as recited in Claim 36. For at least this reason, Applicant submits that Claim 36 is clearly allowable over *Becker*, *Cosman*, and *Griffith et al.*, taken alone or in any proper combination (if any)

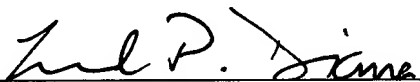
Independent Claim 38 is a computer program product claim corresponding to method Claim 36, and is believed patentable for at least the same reasons discussed above in connection with Claim 36.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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